

REMARKS

In response to the final office action of March 4, 2005, applicant asks that all claims be allowed in view of the following remarks. Claims 2-4, 6, 7, 11-13, 17-19, 21, 22, 24, 26-33, 35, 36, 38, 40-42, 53-57 and 61-99 are pending, of which claims 62, 67, 71, 75 and 96 are independent.

Applicant would like to thank Examiner Phan for the courtesies extended to applicant's representative during the personal interview conducted on May 12, 2005. As reflected by the Interview Summary (see copy of PTOL-413 form attached to this amendment), the Examiner and applicant's representative discussed claims 62, 67 and 68 in comparison with the applied prior art.

Rejection under Section 102

Claims 2-4, 6, 7, 11-13, 17-19, 21, 22, 24, 26-33, 35, 36, 38, 40-42, 53-57 and 61-99 were rejected under 35 U.S.C. § 102 as being anticipated by Burns (U.S. Patent No. 6,324,182). Applicant requests reconsideration and withdrawal of the rejection because Burns does not describe or suggest the subject matter of independent claims 62, 67, 71, 75 and 96, as described more fully below.

Independent Claim 96 and Dependent Claims of Claim 96

Independent claim 96 is directed toward a method of populating distributed cache within a system in which algorithms are employed to identify and prioritize electronic assets to be temporarily stored within the distributed cache. The method includes, *inter alia*, measuring an anticipated demand for the first electronic asset based on criteria that is collected before receiving requests for access to the first electronic asset and that is unrelated to past access requests. The criteria includes non-electronic information. Non-electronic information may be indicative of popularity of a topic associated with the electronic information (as recited in claim 76), may be the popularity for a class of access requestors (as recited in claim 97), or may be indicative of past requests for information similar to the electronic information (as recited in 99).

Applicant requests reconsideration and withdrawal of the rejection to claim 96 because Burns does describe or suggest measuring an anticipated demand for the first electronic asset based on criteria that is collected before receiving requests for access to the first electronic asset

and that is unrelated to past access requests, where the criteria includes non-electronic information, as recited in claim 96.

In rejecting claim 96, the Office action contends that “the method of populating the distributed cache and its limitations are similar to the method for making electronic information more readily available to one or more first access requestors of claims 75-78 and thus these claims are rejected using the same rationale.” See Office action of March 4, 2005 at page 10, lines 1-4. Applicant respectfully disagrees. For example, independent claim 96 recites measuring an anticipated demand for the first electronic asset based on criteria that is collected before receiving requests for access to the first electronic asset and that is unrelated to past access requests, the criteria including non-electronic information. In contrast, independent claim 75 recites anticipating a demand of the access requestors for access to the electronic information based at least on non-electronic information related to the electronic information.

As can be seen, claim 96 differs from claims 75-78 and yet the differences are not addressed in the Office action. Therefore, applicant respectfully requests a new Office action that addresses all features of the pending claims, including the all features of independent claim 96.

The Office action also asserts that “applicants failed to define the terms electronic information and non-electronic information to better distinguish and clarify their meanings. Accordingly, electronic information was interpreted to mean the actual content presented in the electronic information and the non-electronic information was interpreted to mean any metadata that are related to the content of the electronic information.” See Office action of March 4, 2005 at page 18, line 11 to page 19, line 20. Applicant respectfully notes that the recitation of non-electronic information is not indefinite, nor is it rejected as such. The scope of this term is instead unambiguous and the claim scope therefore is clear. Specifically, and facially, non-electronic information is information other than electronic information.

The interpretation of non-electronic information set forth by the Office action (see above quote) therefore is incorrect. Metadata is, by definition, electronic data and, as such, necessarily cannot be non-electronic information.

Turning now to the disclosure of Burns, local service providers schedule delivery of frequently requested content from a content provider prior to a peak time when subscribers are

likely to request the content. See Burns at Abstract. Burns discloses monitoring subscriber requests to determine a pattern of which content (i.e., electronic information) is most frequently requested and when, and scheduling a request to send to the content provider for electronic information at an appropriate time. See Burns at col. 9, lines 11-37. See also Burns at col. 8, lines 26-28 and lines 36-40 (disclosing “holding proxy copies of often used and requested target resources” and copying of a target resource provided to a subscriber is cached when “policy rules governing the cache are met”).

As such, Burns discloses monitoring electronic communications (e.g., subscriber requests for content) to determine a pattern of requests for particular electronic content. Thus, Burns discloses anticipating a demand for electronic information (i.e., content of a Web pages or a video) based on electronic information (i.e., subscriber requests for the electronic information), and does not disclose anticipating a demand of the access requestors for access to the electronic information based at least on non-electronic information related to the electronic information, as recited in claim 96.

The Office action, based on an unsupported interpretation of the term “non-electronic information” as corresponding to electronic meta-data, found the argument above to be non-persuasive. See Office action of March 4, 2005 at page 19, line 17 to page 21, line 2. Applicant continues to assert that Burns discloses anticipating a demand for electronic information based on electronic information.

Moreover, claim 96 recites measuring an anticipated demand for the first electronic asset based on criteria that is collected before receiving requests for access to the first electronic asset and that is unrelated to past access requests, where the criteria includes non-electronic information. As noted previously, the Office action (and the cited Burns reference) does not address this limitation.

In addressing claim 62, however, the Office action contends that Burns discloses “anticipating a demand of the access requestors for access to the electronic information based on at least on non-electronic information related to the electronic information” in portions of columns 8, 9 and 11. See Office action of March 4, 2005 at page 3, lines 6-9 (identifying column 8, lines 41-59; column 9, lines 12-34, and column 11, lines 20-31 and 55-65). As such,

the Office action asserts that anticipating a demand based on non-electronic information is disclosed in the cited portions of Burns. Applicant respectfully disagrees.

The cited portion of column 8 states:

When the request handler 111 receives a request, the local service provider 110 first looks to its own cache memory 124 to determine if a proxy copy of the target resource referenced by the URL is stored locally. The cache memory 124 serves as a quasi-temporary local storage for holding proxy copies of often used and requested target resources. The cache memory 124 can be implemented using different types of memory, including RAM, storage disks (optical magnetic, etc.), and the like. If a proxy copy is stored in the cache memory 124, the target resource is served locally from the cache memory 124. If there is no proxy copy, the local service provider 110 uses the URL request to locate the target resource from a content provider and to request delivery of the target resource over the Internet. The local service provider 110 passes the target resources on to the requesting subscriber and may also cache the target resource in the cache 124 if the policy rules governing the cache are met.

Burns at col. 8, lines 41-59.

In the cited portion, Burns discloses that target resources may be stored in the cache 124 if the policy rules governing the cache are met. Burns' policy manager 128 is an electronic component of a local Internet service provider system and "defines and administers rules that determine which documents or resources are cached in the cache memory 124." See Burns at col. 10, line 48-52. Burns discloses examples of caching rules: "caching resources that are routinely requested by many subscribers, but foregoing caching resources that are rarely or infrequently requested." See Burns at col. 10, line 52-58. See also Burns at col. 7, lines 61-65 (describing Figure 4 as showing a functional block diagram of a local Internet service provider).

As such, the policy manager 128 of Burns uses electronic information to determine whether to cache the target resource. Hence, the cited portion of column 8 does not disclose anticipating a demand based on non-electronic information. Nor does the cited portion of column 8 disclose measuring an anticipated demand for the first electronic asset based on criteria that is collected before receiving requests for access to the first electronic asset and that is unrelated to past access requests where the criteria includes non-electronic information, as recited in claim 96.

With regard to the cited portion of column 9, Burns discloses a pattern recognizer and a scheduler:

The pattern recognizer 116 monitors the patterns of the subscriber requests to determine which content is most frequently requested and when (step 150 in FIG. 5). From these patterns, the pattern recognizer 116 can identify peak times in subscriber traffic and the relation of the peak times to specific requested content (step 152). For instance, suppose that a high number of subscribers frequently request the CNN Web page during the morning hours of 6:30 AM to 8:00 AM. These requests translate into a high number of URL hits for the CNN Web page which are recorded by hit recorder 112 in the URL hit database 114. The pattern recognizer 116 recognizes this recurring pattern of requests for the CNN Web page and identifies the peak time for this Web page to be between 6:30 AM and 8:00 AM.

Using the patterns identified by the pattern recognizer 116, the scheduler 118 schedules delivery of the content at a selected time prior to the peak time (step 154 in FIG. 5). In this example, the scheduler 118 might schedule delivery of the CNN Web page at a time prior to 6:30 AM. For instance, the scheduler 118 might schedule a request for the CNN Web page at 6:00 AM to provide sufficient time to download that page before the earliest subscribers are expected to begin asking for it, yet not too early to ensure that the latest news is included.

Burns at col. 9, lines 12-34.

In the cited portion of column 9, Burns discloses the use of a pattern recognizer 116 to monitor electronic requests of subscribers to determine the most frequently requested content. Burns' pattern recognizer 116 is an electronic component of a local Internet service provider system. See Burns at Figure 4 (showing the pattern recognizer 116) and col. 7, lines 61-65 (describing Figure 4 as showing a functional block diagram of a local Internet service provider).

The cited portion of column 9 also discloses a scheduler 118 that schedules delivery of the content at a selected time prior to the peak time based on patterns identified by the pattern recognizer 116. Burns' scheduler 118 is an electronic component of a local Internet service provider system. See Burns at Figure 4 (showing the scheduler 118) and col. 7, lines 61-65 (describing Figure 4 as showing a functional block diagram of a local Internet service provider).

The cited portion of column 9 discloses that both the pattern recognizer 116 and the scheduler 118 use electronic information. The cited portion of column 9 does not disclose anticipating a demand based on non-electronic information. Nor does the cited portion of column 9 disclose measuring an anticipated demand for the first electronic asset based on criteria that is collected before receiving requests for access to the first electronic asset and that is

unrelated to past access requests where the criteria includes non-electronic information, as recited in claim 96.

With regard to the cited portion of column 11, Burns discloses a pattern recognizer:

The local service provider 110 also maintains a subscriber database 130 which stores lists of subscribers (or LAN users in the LAN configuration) and pertinent information about them (e.g., routing addresses, billing addresses, etc.). A usage reporter 132 uses the URL hit information from the URL hit database 114 and subscriber information from the subscriber database 130 to generate reports on subscriber usage patterns. These reports can be used by the operator to efficiently allocate computer resources to best satisfy the needs of its clientele. The reports can also be used by content providers to help them assess the popularity of their Web sites and the type of subscribers who visit them....

The Internet/ISP connection is often the bottleneck for streaming data and is typically the connection least likely to be upgraded due to economic factors surrounding the business of the ISP. Although not required, in this implementation, the content may be pushed top down from the content provider over the Internet and thus, the system may be referred to as a "push-caching" system.

Network system 200 is similar to the configuration of the FIG. 2 network system 50 in that it has a content server 52 which serves content over a high-speed, high-bandwidth network 54, Ma local ISPs 56, to end users 58 and 60.

Burns at col. 11, lines 20-31 and 56-64.

In the cited portions of column 11, Burns discloses the use of a subscriber database 130 that is used to produce reports on subscriber usage patterns and pushing content from the content provider. The cited portions of column 11 does not disclose using non-electronic information and, hence, cannot disclose anticipating a demand based on non-electronic information. Nor does the cited portions of column 11 disclose measuring an anticipated demand for the first electronic asset based on criteria that is collected before receiving requests for access to the first electronic asset and that is unrelated to past access requests where the criteria includes non-electronic information, as recited in claim 96.

Accordingly, Burns fails to describe or suggest anticipating demand based on at least non-electronic information, as recited in claim 96. Moreover, Burns does not describe or suggest measuring an anticipated demand for the first electronic asset based on criteria that is collected

before receiving requests for access to the first electronic asset and that is unrelated to past access requests. For at least these reasons, applicant requests reconsideration and withdrawal of the § 102 rejection of claim 96. At least for their dependency on claim 96, applicant requests reconsideration and withdrawal of the § 102 rejection of dependent claims 97-99.

Independent Claim 75 and Dependent Claims of Claim 75.

Claim 75 is directed to a method for making electronic information more readily available to one or more first access requestors based on an anticipated demand for the electronic information. The method includes anticipating a demand of the access requestors for access to the electronic information based at least on non-electronic information related to the electronic information. Non-electronic information may be indicative of popularity of a topic associated with the electronic information (as recited in claim 76), may be the popularity for a class of access requestors (as recited in claim 77), or may be indicative of past requests for information similar to the electronic information (as recited in 78). The method also includes determining to duplicate electronic information from a data source to a storage medium that is more accessible to the first access requestors based on a size of the electronic information and on the anticipated demand, accessing the electronic information stored on the data source, and duplicating the electronic information to the storage medium.

For at least the reasons noted above with respect to the § 102 rejection of independent claim 96, Burns does not describe or suggest anticipating a demand for access to electronic information based on non-electronic information related to the electronic information, as recited in claim 75.

Accordingly, applicant requests reconsideration and withdrawal of the § 102 rejection of claim 75. At least for their dependency on claim 75, applicant requests reconsideration and withdrawal of the rejection of dependent claims 53-57, 61, and 76-83.

Independent Claim 62 and Dependent Claims of Claim 62

Claim 62, as amended, is directed to a method for making electronic information more readily available to one or more access requestors. The method includes anticipating a demand of access requestors for access to electronic information based at least on non-electronic information related to the electronic information. The method also includes identifying for

transport electronic information stored at a data source, transporting the identified electronic information from the data source to a requesting access requestor, determining, based on a size of the electronic information and the anticipated demand, to store the already identified and transported electronic information on a storage medium that is more accessible to the access requestors than the data source, and storing the transported electronic information on the storage medium.

For at least the reasons noted above with respect to the § 102 rejection of independent claim 96, Burns does not describe or suggest anticipating a demand for access to electronic information based on non-electronic information related to the electronic information, as recited in claim 75.

Accordingly, applicant requests reconsideration and withdrawal of the § 102 rejection of claim 62. At least for their dependency on claim 62, applicant requests reconsideration and withdrawal of the rejection of dependent claims 2-4, 6, 7, 9, 11-13, and 84-87.

Independent claim 67 and dependent claims of claim 67.

Amended, independent claim 67 recites a system for making electronic information more readily available to one or more first access requestors. Claim 67, as amended, includes an anticipating software module that anticipates a demand of the first access requestors for access to electronic information based at least on non-electronic information related to the electronic information.

As described above, Burns does not describe or suggest anticipating a demand of access requestors for access to electronic information based at least on non-electronic information related to the electronic information. For at least the reasons described above, applicant requests reconsideration and withdrawal of the § 102 rejection of claim 67. At least for their dependency on claim 67, applicant requests reconsideration and withdrawal of the rejection of dependent claims 17-19, 21, 22, 24, 26, 27 and 88-91.

Independent Claim 71 and Dependent Claims of Claim 71

Amended, independent claim 71 recites a computer readable medium having a code segment for anticipating a demand of the access requestors for access to the electronic information based at least on non-electronic information related to the electronic information.

As described above, Burns does not describe or suggest anticipating a demand of access requestors for access to electronic information based at least on non-electronic information related to the electronic information. For at least the reasons described above, applicant requests reconsideration and withdrawal of the § 102 rejection of claim 71. At least for their dependency on claim 71, applicant requests reconsideration and withdrawal of the rejection of dependent claims 31-33, 35, 36, 38, 40-42 and 92-95.

Rejection of Claims under 35 U.S.C. § 103

Claims 2-4, 6, 7, 11-13, 17-19, 21, 22, 24, 26-33, 35, 36, 40-42, 53-57 and 61-99 also were rejected under 35 U.S.C. § 103 as being unpatentable over Pirolli (U.S. Patent No. 6,098,064) in view of Malkin (U.S. Patent No. 6,085,193).

The Office action interpreted non-electronic information “to mean any metadata that are related to the content of electronic information but are not the content of the electronic information itself.” See Office action of March 4, 2005 at page 21, lines 7-9. As noted above with respect to the anticipation rejection, metadata is electronic data and, as such, is not non-electronic information, which is something other than electronic information. Based on this misunderstanding, the Office action found applicant’s arguments with regard to Pirolli and Malkin unpersuasive. See Office action at page 21, lines 3-15. For example, the Office action’s response to applications arguments contends that “the recency of document use and the frequency of document use disclosed in Pirolli are not the content of the electronic information but are metadata information that are related to the content of the electronic information.” See Office action of March 4, 2005 at page 21, lines 9-12. Similarly, the Office action’s response to applicant’s arguments states that “the data access patterns and object size used for pre-fetching electronic information disclosed in Malkin are also not the content of the electronic information but are the metadata information that are related to the content of the electronic information.” See Office action of March 4, 2005 at page 21, lines 12-15. Regardless of whether Pirolli and Malkin each disclose electronic information that is related to the content of electronic information, applicant again strenuously points out that Pirolli, Malkin or the proper combination of the references do not describe or suggest anticipating a demand for electronic information based on non-electronic information, as described more fully below.

Turning to the disclosures of Pirolli and Malkin, Pirolli discloses prefetching and caching an electronic document based on a “need probability” that is computed for the electronic document. See Pirolli at Abstract. Pirolli’s need probability is computed based on a document content factor and a document history factor. See Pirolli at Abstract. The content factor of Pirolli’s need probability is determined by computing the correlation between words in the document and a set of electronic documents (e.g., web pages) associated with a user (or a client computer used by a user). See Pirolli at Abstract and col. 8, line 51 to col. 9, line 16. Pirolli refers to the set of electronic documents to which words in a particular electronic document are compared as a “content Q of the operating environment.” See Pirolli at col. 8, lines 51-62. Hence, Pirolli discloses using electronic information (i.e., words in the electronic information and other electronic documents) to determine a content factor of the need probability used to anticipate demand for a particular electronic document.

Furthermore, the document history factor of Pirolli’s need probability “is determined by integrating both the recency of document use and the frequency of document use.” See Pirolli at Abstract. Pirolli discloses determining the number of days since an electronic document was last accessed and the frequency of accesses of the electronic document over a period of days. See Pirolli at col. 8, lines 1-32. Pirolli describes collecting this data from web proxy logs and web sites. See Pirolli at col. 8, lines 41-45. Hence, Pirolli determines the history factor, like the content factor, based on electronic information.

Although Pirolli discusses a proxy server that “services a community of users that share shome interests or some mission,” Pirolli does not use membership in a community of users as a basis for anticipating demand. See Pirolli at col. 11, lines 37-51. More particularly, Pirolli states:

By prefetching and caching those documents with the greatest need probability, the proxy server tunes its local cache to retain those documents which are most needed by the community of users.

Pirolli at col. 11, lines 48-51.

Even when servicing a particular community of users, Pirolli’s process to prefetch and cache an electronic document remains the same – namely, a need probability is computed using only electronic information.

Pirolli discloses, in the background of the invention, that “[t]he best way to optimize caching on a client computer is to define a set of documents that best predicts which documents are to be accessed by a user in the future” and store “the documents predicted to be in the set” in the cache. See Pirolli at col. 1, lines 50-54. Pirolli describes techniques to do so. As described above, Pirolli discloses prefetching and caching an electronic document based on a “need probability” that is based on a document content factor and a document history factor and is computed for the electronic document. Pirolli does not describe or suggest using non-electronic information as a basis for caching.

Thus, Pirolli does not describe or suggest anticipating a demand of access requestors for access to electronic information based at least on non-electronic information related to the electronic information.

Malkin does not remedy Pirolli's failure to describe or suggest anticipating a demand of access requestors for access to electronic information based at least on non-electronic information related to the electronic information. Malkin discloses techniques for prefetching electronic information by identifying data access patterns from a large number of current users and prefetching electronic information based on a dynamic interpretation of the data access patterns. See Malkin at Abstract and col. 8, lines 38-55. Malkin also discloses prefetching electronic information based on object size and criticality derived from data access patterns. See Malkin at col. 8, lines 22-29 and col. 9, lines 3-19 (describing how prefetch hint information for a data object is computed based on data access patterns and includes criticality information). As such, Malkin discloses only prefetching electronic information based on only the use of electronic information.

Thus, Malkin does not describe or suggest anticipating a demand of access requestors for access to electronic information based at least on non-electronic information related to the electronic information.

Each of Pirolli and Malkin fail to show anticipating a demand of access requestors for access to electronic information based at least on non-electronic information related to the electronic information. Thus, necessarily the combination of Pirolli and Malkin fails to describe or suggest anticipating a demand of access requestors for access to electronic information based at least on non-electronic information related to the electronic information because the

constituent references of Pirolli and Malkin each fail to show the anticipating a demand of access requestors for access to electronic information based at least on non-electronic information related to the electronic information.

Independent Claims 62, 67 and 71 Dependent Claims of Claims 62, 67 and 71

Applicant requests reconsideration and withdrawal of the § 103 rejection to claims 62, 67 and 71 because neither Pirolli, Malkin or any combination of the two references describes or suggests anticipating a demand of the access requestors for access to the electronic information based at least on non-electronic information related to the electronic information.

As described previously, Pirolli and Malkin fail to show anticipating a demand of access requestors for access to electronic information based at least on non-electronic information related to the electronic information. Thus, necessarily the combination of Pirolli and Malkin fails to describe or suggest anticipating a demand of access requestors for access to electronic information based at least on non-electronic information related to the electronic information because the constituent references of Pirolli and Malkin each fail to show the recited limitation.

As described previously, each of independent claims 62, 67 and 71 recites anticipating a demand of access requestors for access to electronic information based at least on non-electronic information related to the electronic information.

For at least the reasons described above, applicant requests reconsideration and withdrawal of the § 103 rejection of amended independent claims 62, 67 and 71 and their respective dependent claims 2-4, 6, 7, 9, 11-13, 17-19, 21, 22, 24, 26, 27, 31-33, 35, 36, 38, 40-42, and 84-91.

Independent Claim 75 and Dependent Claims of Claim 75

Applicant requests reconsideration and withdrawal of the § 103 rejection to claim 75 because neither Pirolli, Malkin or any combination of the two references describes or suggests anticipating a demand of the access requestors for access to the electronic information based at least on non-electronic information related to the electronic information, as recited in claim 75.

As described previously, neither Pirolli, Malkin nor any proper combination of the reference describe or suggest anticipating a demand of access requestors for access to electronic information based at least on non-electronic information related to the electronic information.

For at least these reasons, applicant requests reconsideration and withdrawal of the § 103 rejection of claim 75. At least for their dependency on claim 75, applicant requests reconsideration and withdrawal of the § 103 rejection of dependent claims 53-57, 61, and 76-83.

Independent Claim 96 and Dependent Claims of Claim 96

Applicant requests reconsideration and withdrawal of the § 103 rejection to claim 96 because neither Pirolli, Malkin or any proper combination of the two references describes or suggests measuring an anticipated demand for the first electronic asset based on criteria that is collected before receiving requests for access to the first electronic asset and that is unrelated to past access requests, the criteria including non-electronic information, as recited in claim 96.

The Office action repeats the contention that “the method of populating the distributed cache and its limitations are similar to the method for making electronic information more readily available to one or more first access requestors of claims 75-78 and thus these claims are rejected using the same rationale.” See Office action of March 4, 2005 at page 18, lines 6-10. As noted previously, applicant respectfully disagrees and notes that claim 96 recites measuring an anticipated demand for the first electronic asset based on criteria that is collected before receiving requests for access to the first electronic asset and that is unrelated to past access requests, the criteria including non-electronic information, which is a limitation not found in claims 75-78.

As described above, neither Pirolli, Malkin, nor any proper combination of the references describes or suggests anticipating a demand of access requestors for access to electronic information based at least on non-electronic information related to the electronic information. As such, Pirolli, Malkin, nor any proper combination of the references describes or suggests measuring an anticipated demand for an first electronic asset based on criteria including non-electronic information. Necessarily, Pirolli, Malkin, nor any proper combination of the references do not describe measuring an anticipated demand for the first electronic asset based on criteria that is collected before receiving requests for access to the first electronic asset and that is unrelated to past access requests, the criteria including non-electronic information, as recited in claim 96.

For at least these reasons, application requests reconsideration and withdrawal of the § 103 rejection of claim 96 and claims 97-99, which depend directly or indirectly from claim 96.

Conclusion

It is believed that all of the pending issues have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this reply should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this reply, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

Applicant notes that June 4, 2005 fell on a Saturday. No fee is believed due. Please apply any charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: June 6, 2005



Barbara A. Benoit
Reg. No. 54,777

Customer No. 26171
Fish & Richardson P.C.
1425 K Street, N.W.
11th Floor
Washington, DC 20005-3500
Telephone: (202) 783-5070
Facsimile: (202) 783-2331

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☐ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.